

Attorney Docket No. 10139/04302 (00276-06PUS1)

REMARKS

Claims 12, 14 and 20-23 have been amended. Claims 1-11 have been canceled. No new matter has been added. Thus, claims 12-25 remain pending in the present application. In view of the above-noted amendments and the following remarks, it is respectfully submitted that all of the presently pending claims are in condition for allowance.

Claims 12-19 and 21-24 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over U.S. Patent No. 5,766,174 to Perry in view of U.S. Patent No. 5,041,115 to Frigg et al. ("Frigg") in further view of PCT Appln. No. WO 00/06039 to Bühren et al. ("Bühren").

Amended claim 12 recites an intramedullary nail comprising "an elongated nail body having a proximal end, a distal end for insertion into the medullary canal, a central axis and a total length L; three locking sections along the length of the nail body between the proximal and distal ends, each locking section including a through-hole for receiving a locking screw, the three locking sections including a proximal locking section, a medial isthmus locking section and a distal locking section; and two distinct intermediate sections separating the three locking sections...wherein the locking section nearest the proximal end comprises an elongated through-hole; and *wherein the isthmus locking section includes a proximal through hole and a distal through hole, the proximal through hole being arranged at an angle of 90° relative to the distal through hole.*" Support for the amendment to claim 12 can be found in at least paragraph [0036] of the Specification, which recites "the isthmus locking section 7 has two through holes 8 which are disposed at an angle α of 90°," as further depicted in Figs. 1 and 6. (See Specification, ¶ [0024], [0036]; Figs. 1-3, 6).

It is respectfully submitted that Perry fails to teach or suggest an intramedullary nail comprising three locking sections "*wherein the isthmus locking section includes a proximal through hole and a distal through hole, the proximal through hole being arranged at an angle of*

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90° relative to the distal through hole,” as recited in amended claim 12. Rather, the purported isthmus locking section of Perry only comprises bone transfixation holes 34a, 34b which are formed parallel to one another. (See Perry, col. 3, ll. 10-19, 33-40; col. 5, ll. 43-53; Figs. 1-6). Furthermore, it is respectfully submitted that Perry is incapable of being modified to overcome this deficiency since the device of Perry is explicitly configured with parallel transfixation holes 32a, 32b, 34a, 34b so that insertion of a locating screw 28 into an indent 59 formed in anvil assembly 26 aligns the guides holes 40a, 40b, 42a, 42b of the alignment tower 24 with respective transfixation holes 32a, 32b, 34a, 34b of the intramedullary nail 20. (*Id.* at col. 3, ll. 33-40; col. 5, li. 40 - col. 6, li. 2; Figs. 1-3). It is therefore respectfully submitted that since Perry only teaches one possible configuration of the alignment tower 24 with respect to the intramedullary nail 20 (i.e., the configuration assumed when the locating screw 28 is received in the indent 59), Perry teaches away from a through hole extending through an isthmus locking section, “the proximal through hole being arranged at an angle of 90° relative to the distal through hole,” as recited in claim 12. Rather, such a through hole would find no utility in the device of Perry since there would be no means for locating the hole within the bone. It is therefore respectfully submitted that Perry is incapable of being modified to overcome this limitation.

Frigg fails to cure this deficiency in Perry. Specifically, Frigg does not teach or suggest any holes extending through an isthmus locking section at all. It is therefore respectfully submitted that neither Perry nor Frigg, taken alone or in combination, teach or suggest the aforementioned limitations of amended claim 12.

Buhren also fails to cure these deficiencies in Perry and Frigg. Specifically, Buhren also fails to teach or suggest a medial isthmus locking section “wherein the isthmus locking section includes a proximal through hole and a distal through hole, the proximal through hole being arranged at an angle of 90° relative to the distal through hole,” as recited in claim 12. Rather, Buhren does not teach an isthmus locking section comprising any through holes at all.

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Furthermore, it is respectfully submitted that the Examiner has not cited anything in Buhren capable of meeting this limitation.

It is therefore respectfully submitted that neither Perry nor Frigg nor Buhren, taken alone or in any combination, teach or are capable of teaching the limitation of "*wherein the isthmus locking section includes a proximal through hole and a distal through hole, the proximal through hole being arranged at an angle of 90° relative to the distal through hole,*" as recited in claim 12 and that claim 12 is therefore in condition for allowance. Because claims 13-19 and 21-22 depend from and therefore include all of the limitations of claim 12, it is respectfully submitted that these claims are also allowable.

Amended claim 23 recites limitations substantially similar to claim 12, including an intramedullary nail comprising a proximal locking section "*wherein the isthmus locking section includes a proximal through hole and a distal through hole, the proximal through hole being arranged at an angle of 90° relative to the distal through hole.*" It is therefore respectfully submitted that claim 23 is allowable over Perry, Frigg and Buhren, taken alone or in any combination, for the same reasons noted above with respect to claim 12. Because claim 24 depends from and therefore includes all of the limitations of claim 23, it is respectfully submitted that this claim is also allowable.

Claims 20 and 25 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over Perry in view of Frigg in view of Buhren in further view of U.S. Patent No. 6,270,499 to Leu et al. ("Leu").

Claims 20 and 25 depend from and therefore include all of the limitations of claims 12 and 23, respectively. As noted above, Perry, Frigg and Buhren fail to teach or suggest the limitations of claims 12 and 23. Leu fails to overcome these deficiencies in claims 12 and 23. Specifically, Leu only teaches bores 7 and an anteroposterior bore 29 extending through the

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intramedullary nail 1. (*See* Leu, col. 3, ll. 57-62; Figs. 1, 4, 6). While Leu makes no explicit disclosure with respect to the angles of these bores relative to one another, it is evident from the drawings of Leu that these bores are not angled perpendicularly to each other. Specifically, as shown in the cross-sectional view of Fig. 1, the bores 7 are separated from the bore 29 by an angle less than 90°. (*Id.*). The perspective views of Figs. 4 and 6 further confirm that each of these holes are arranged at angles of less than 90° relative to one another. (*Id.*). It is therefore respectfully submitted that Leu also fails to cure the above-recited deficiencies in Perry, Frigg and Buhren. It is therefore respectfully submitted that claims 12 and 23 are allowable over Perry, Frigg, Buhren and Leu, taken alone or in any combination. Claims 20 and 25 are therefore also allowable as being dependent on allowable base claims.

In light of the foregoing, Applicants respectfully submit that all of the pending claims are in condition for allowance. All issues raised by the Examiner having been addressed, and an early and favorable action on the merits is earnestly solicited.

Respectfully submitted,

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